

Industrial Gas Manufacturing: 2002

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2002 Economic Census

Manufacturing

Industry Series



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U.S. Department of Commerce
Economics and Statistics Administration
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-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)				
325120, Industrial gas manufacturing 2002..	104	568	10 534	587 440	5 046	10 542	275 520	3 643 110	2 293 157	5 902 085	375 174
2001..	N	N	11 097	564 396	6 121	13 143	313 214	3 097 214	1 953 171	5 073 433	950 966
2000..	N	N	11 266	564 479	6 265	14 237	313 635	2 992 800	1 952 558	4 896 447	302 372
1999..	N	N	11 901	575 695	6 817	14 542	318 225	3 151 534	2 080 495	5 221 389	382 349
1998..	N	N	12 548	581 876	6 979	14 806	308 831	3 730 162	2 070 292	5 761 425	696 812
1997..	119	646	12 636	579 853	6 814	14 518	296 561	3 485 572	1 918 360	5 416 308	728 910

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
325120, Industrial gas manufacturing												
United States	—	568	138	10 534	587 440	5 046	10 542	275 520	3 643 110	2 293 157	5 902 085	375 174
Arizona	—	7	2	132	6 373	82	172	3 570	35 734	32 492	68 593	2 387
California	4	54	17	889	42 420	304	622	15 435	280 881	153 036	433 789	39 178
Colorado	2	7	3	134	8 003	30	61	1 611	30 697	12 847	43 555	2 446
Illinois	1	21	4	220	10 568	107	194	4 740	80 527	36 426	117 145	7 337
Indiana	—	23	8	514	28 617	134	291	7 128	225 872	93 277	319 693	13 300
Kansas	—	12	1	110	5 550	52	119	2 719	116 623	46 026	162 191	1 480
Kentucky	—	12	2	295	19 076	185	434	10 971	215 700	93 315	293 298	8 498
New York	—	10	4	201	10 725	51	112	2 901	67 956	28 558	96 555	12 419
Ohio	—	35	12	637	29 307	298	548	13 265	198 094	93 091	290 323	39 805
Pennsylvania	—	27	5	461	21 697	168	341	7 655	97 927	35 200	130 502	21 622
Texas	—	77	16	1 573	94 152	878	1 901	53 881	387 734	734 605	1 127 499	107 444
Washington	—	11	2	125	7 228	45	103	2 276	50 016	24 534	74 442	1 386
West Virginia	—	14	2	133	6 633	65	139	3 460	68 245	28 805	78 894	4 753

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
325120, Industrial gas manufacturing	
Companies ¹	number.. 104
All establishments ²	number.. 568
Establishments with 1 to 19 employees	number.. 430
Establishments with 20 to 99 employees	number.. 125
Establishments with 100 employees or more	number.. 13
All employees ³	number.. 10 534
Total compensation	\$1,000.. 762 404
Annual payroll	\$1,000.. 587 440
Total fringe benefits	\$1,000.. 174 964
Production workers, average for year	number.. 5 046
Production workers on March 12	number.. 4 955
Production workers on May 12	number.. 5 086
Production workers on August 12	number.. 5 083
Production workers on November 12	number.. 5 038
Production worker hours	1,000.. 10 542
Production worker wages	\$1,000.. 275 520
Total cost of materials	\$1,000.. 2 293 157
Materials, parts, containers, packaging, etc., used	\$1,000.. 1 217 440
Resales	\$1,000.. 88 525
Purchased fuels	\$1,000.. 199 537
Purchased electricity	\$1,000.. 761 050
Contract work	\$1,000.. 26 605
Quantity of electricity purchased for heat and power	1,000 kWh.. 19 221 204
Quantity of electricity generated less sold for heat and power	1,000 kWh.. D
Total value of shipments	\$1,000.. 5 902 085
Primary products value of shipments	\$1,000.. 5 388 652
Secondary products value of shipments	\$1,000.. 284 552
Total miscellaneous receipts	\$1,000.. 228 881
Value of resales	\$1,000.. 143 850
Contract receipts	\$1,000.. D
Other miscellaneous receipts	\$1,000.. D
Primary products specialization ratio	percent.. 95
Value of primary products shipments made in all industries	\$1,000.. 5 814 730
Value of primary products shipments made in this industry	\$1,000.. 5 388 652
Value of primary products shipments made in other industries	\$1,000.. 426 078
Coverage ratio	percent.. 93
Value added	\$1,000.. 3 643 110
Total inventories, beginning of year	\$1,000.. 281 600
Finished goods inventories	\$1,000.. 149 958
Work-in-process inventories	\$1,000.. 45 024
Materials and supplies inventories	\$1,000.. 86 618
Total inventories, end of year	\$1,000.. 323 337
Finished goods inventories	\$1,000.. 177 641
Work-in-process inventories	\$1,000.. 51 523
Materials and supplies inventories	\$1,000.. 94 173
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. 8 955 161
Total capital expenditures (new and used)	\$1,000.. 375 174
Buildings and other structures (new and used)	\$1,000.. 20 755
Machinery and equipment (new and used)	\$1,000.. 354 419
Automobiles, trucks, etc., for highway use	\$1,000.. 19 879
Computers and peripheral data processing equipment	\$1,000.. 8 211
All other expenditures for machinery and equipment	\$1,000.. 326 329
Total retirements	\$1,000.. 177 499
Gross value of depreciable assets at end of year	\$1,000.. 9 152 836
Depreciation charges during year	\$1,000.. 434 739
Total rental payments	\$1,000.. 39 760
Buildings and other structures	\$1,000.. 24 344
Machinery and equipment	\$1,000.. 15 416
Total other expenses ⁴	\$1,000.. 277 269
Response coverage ratio ⁵	percent.. 76
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 45 017
Communications services ⁴	\$1,000.. 4 832
Legal services ⁴	\$1,000.. 222
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 258
Advertising and promotional services ⁴	\$1,000.. 435
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 1 196
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 6 453
Management consulting and administrative services ⁴	\$1,000.. 3 833
Taxes and license fees ⁴	\$1,000.. 46 049
All other expenses ⁴	\$1,000.. 168 973

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
325120, Industrial gas manufacturing											
All establishments	—	568	10 534	587 440	5 046	10 542	275 520	3 643 110	2 293 157	5 902 085	375 174
Establishments with—											
1 to 4 employees	—	243	455	21 509	358	691	16 767	458 877	115 157	571 048	54 221
5 to 9 employees	1	98	674	35 736	431	957	22 182	334 675	176 893	510 974	46 131
10 to 19 employees	1	89	1 235	64 798	701	1 545	34 543	637 863	336 680	954 932	52 437
20 to 49 employees	1	102	3 146	154 472	1 142	2 378	54 632	749 014	367 066	1 114 113	85 769
50 to 99 employees	—	23	g	D	D	D	D	D	D	D	D
100 to 249 employees	—	10	1 522	92 130	944	2 013	55 232	516 055	649 011	1 151 290	78 408
250 to 499 employees	—	2	f	D	D	D	D	D	D	D	D
500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	49	150	6 817	79	160	2 317	37 625	12 988	50 612	4 361

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
325120	Industrial gas manufacturing	568	10 534	587 440	5 046	10 542	275 520	3 643 110	2 293 157	5 902 085	375 174
3251201	Acetylene	21	266	11 336	198	412	7 381	29 250	20 341	48 712	8 892
3251204	Carbon dioxide	69	816	38 991	393	755	16 709	262 617	91 765	353 126	28 858
3251207	Nitrogen	185	2 185	113 684	750	1 612	41 352	936 410	415 848	1 351 213	86 692
325120A	Oxygen	61	876	50 404	333	724	19 470	549 949	273 084	820 942	51 569
325120C	Argon and hydrogen	38	2 878	202 208	1 471	3 131	103 747	767 233	894 610	1 667 097	131 211
325120G	Fluorocarbon gases	8	738	43 357	474	1 044	25 300	327 208	286 729	598 208	15 115
325120U	Other industrial gases	42	1 343	61 937	866	1 705	37 149	342 057	137 959	479 369	11 412

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
325120	Industrial gas manufacturing	2002.. N 1997.. N	X X	X X	5 814 730 5 239 133
3251201	Acetylene	2002.. N 1997.. N	X X	X X	55 446 139 751
32512011	Acetylene	2002.. N 1997.. N	X X	X X	55 446 139 751
3251201100	Acetylene ¹	2002.. 17 1997.. 24	X X	X X	55 446 139 751
3251204	Carbon dioxide	2002.. N 1997.. N	X X	X X	452 088 363 123
32512041	Carbon dioxide	2002.. N 1997.. N	X X	X X	452 088 363 123
3251204100	Carbon dioxide ¹	2002.. 35 1997.. 34	X X	X X	452 088 363 123
3251207	Nitrogen	2002.. N 1997.. N	X X	X X	1 141 396 1 198 873
32512071	Nitrogen	2002.. N 1997.. N	X X	X X	1 141 396 1 198 873
3251207100	Nitrogen ¹	2002.. 18 1997.. 22	X X	X X	1 141 396 1 198 873
325120A	Oxygen	2002.. N 1997.. N	X X	X X	807 573 993 637
325120A1	Oxygen	2002.. N 1997.. N	X X	X X	807 573 993 637
325120A100	Oxygen ¹	2002.. 20 1997.. 18	X X	X X	807 573 993 637
325120C	Argon and hydrogen	2002.. N 1997.. N	X X	X X	1 741 796 N
325120C1	Argon and hydrogen	2002.. N 1997.. N	X X	X X	1 741 796 N
325120C100	Argon and hydrogen ¹	2002.. 25 1997.. N	X X	X X	1 741 796 N
325120G	Fluorocarbon gases	2002.. N 1997.. N	X X	X X	591 962 N
325120G1	Fluorocarbon gases	2002.. N 1997.. N	X X	X X	591 962 N
325120G100	Fluorocarbon gases	2002.. 10 1997.. N	X X	X X	591 962 N
325120U	Other industrial gases	2002.. N 1997.. N	X X	X X	512 380 N
325120U1	Other industrial gases	2002.. N 1997.. N	X X	X X	512 380 N
325120U100	Other industrial gases (including helium, nitrous oxide, elemental, and other compressed gases)	2002.. 17 1997.. N	X X	X X	512 380 N
325120W	Industrial gas manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	512 089 333 826
325120WY	Industrial gas manufacturing, nsk, total	2002.. N 1997.. N	X X	X X	512 089 333 826
325120WYWW	Industrial gas manufacturing, nsk, for nonadministrative-record establishments	2002.. N 1997.. N	X X	X X	462 512 245 573
325120WYWY	Industrial gas manufacturing, nsk, for administrative-record establishments	2002.. N 1997.. N	X X	X X	49 577 88 253

¹For additional detail, see Current Industrial Report MQ325C, Industrial Gases.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3251201	Acetylene	
	United States	2002 .. 55 446
		1997 .. 139 751
3251204	Carbon dioxide	
	United States	2002 .. 452 088
		1997 .. 363 123
	California	2002 .. 54 790
		1997 .. 19 215
	Illinois	2002 .. 33 410
		1997 .. 12 708
	Indiana	2002 .. 19 594
		1997 .. N
	Kansas	2002 .. 8 816
		1997 .. 8 536
	Ohio	2002 .. 17 431
		1997 .. 16 544
3251207	Nitrogen	
	United States	2002 .. 1 141 396
		1997 .. 1 198 873
	California	2002 .. 159 467
		1997 .. 150 722
	Indiana	2002 .. 87 864
		1997 .. 85 657
	New York	2002 .. 49 159
		1997 .. 58 795
	Ohio	2002 .. 92 322
		1997 .. 63 487
	Pennsylvania	2002 .. 55 237
		1997 .. 81 335
	Texas	2002 .. 110 595
		1997 .. 216 727
	Washington	2002 .. 20 991
		1997 .. 26 879
	West Virginia	2002 .. 28 453
		1997 .. 23 949
325120A	Oxygen	
	United States	2002 .. 807 573
		1997 .. 993 637
	California	2002 .. 55 642
		1997 .. 46 329
	Illinois	2002 .. 21 625
		1997 .. 32 148
	New York	2002 .. 14 601
		1997 .. 19 348
	Ohio	2002 .. 97 448
		1997 .. 81 801
	Pennsylvania	2002 .. 27 027
		1997 .. 36 014
	Texas	2002 .. 113 194
		1997 .. 221 781
	Washington	2002 .. 13 753
		1997 .. 15 353
	West Virginia	2002 .. 21 973
		1997 .. N
325120C	Argon and hydrogen	
	United States	2002 .. 1 741 796
		1997 .. N
	California	2002 .. 65 337
		1997 .. N
	Illinois	2002 .. 30 951
		1997 .. N
	Indiana	2002 .. 78 375
		1997 .. N
	New York	2002 .. 28 062
		1997 .. N
	Ohio	2002 .. 43 368
		1997 .. N
	Pennsylvania	2002 .. 12 620
		1997 .. N
	Texas	2002 .. 536 293
		1997 .. N
	Washington	2002 .. 8 749
		1997 .. N
	West Virginia	2002 .. 11 982
		1997 .. N
325120G	Fluorocarbon gases	
	United States	2002 .. 591 962
		1997 .. N
325120U	Other industrial gases	
	United States	2002 .. 512 380
		1997 .. N
	California	2002 .. 7 352
		1997 .. N
	Ohio	2002 .. 21 439
		1997 .. N
	Pennsylvania	2002 .. 17 493
		1997 .. N

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. **Materials Consumed by Kind: 2002 and 1997**

[Not applicable for this report]